

Visit of Deputy Under Secretary of the Army (Operations Research)

Deputy Under Secretary of the Army for Operations Research, Mr. Walter W. Hollis, paid a visit to ATC. During Hollis' visit in February 2005, he received a briefing on the up-armored vehicle testing that has been ongoing at ATC since August 2003.

After the briefing, Hollis voiced his appreciation for all the work ATC has been doing with the up-armored program.

"Thank you all very much for your dedication, your service to your country, and particular for your service to the soldier," he said. ●



Before leaving the installation, Hollis (sixth from left) took the time to pose for a photo with ATC employees.

ATC Globe

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Farewell from the ATC Commander

by Colonel Mary Brown, Commander, Aberdeen Test Center



Col. Mary K. Brown

The last four years have been some of the most rewarding of my career in the military. I have

worked with an outstanding group of people here at ATC that have accomplished so much in such a short amount of time. I can honestly say that the employees of ATC give 100 percent each and every day in order to ensure that the U.S. Armed forces have the best weapons, vehicles and equipment in the world. Sometimes accomplishing this requires working long hours, weekends and missed

vacations, but ATC's employees willingly make the sacrifice to support our nation's Warfighter.

ATC's future is bright. We are continuing to support the Warfighter, as well as increasing our private industry testing and forming partnerships with academia. ATC is also playing a large role in Future Combat Systems. Important Warfighter training exercises are being conducted at ATC. We are continuing to upgrade our existing facilities and create new ones to meet our customer's needs. As the Army transforms, ATC will transform with it to continue to be the most diverse test center within the Department of Defense.

Please join me in welcoming Col. John P. Rooney as the new ATC commander. Col. Rooney is coming to ATC from the U.S. Army Developmental Test Command where he is Chief of Staff. During his time as Chief of Staff, Col. Rooney worked closely with ATC on the up-armored vehicle program. Prior to that assignment he was Deputy Chief of Staff for Operations of the U.S. Army Test and Evaluation Command (ATEC), so he has a great background in testing.

Col. Rooney will be a great addition to the ATC family and I wish him the best. ●

Technical Director's Corner

by John R. Wallace, Technical Director, Aberdeen Test Center



John R. Wallace

To begin, I'd like to say farewell to Colonel Brown. She has led ATC through extensive support to the war effort and it has been a pleasure working for her. We wish her the best of luck. I'd also like to welcome Colonel Rooney. I look forward to working with him as ATC continues to support the Army's Transformation.

I'd also like to take a moment to share some of my thoughts about safety at ATC. As you know, safety is paramount in everything we do. ATC performs safety

confirmation testing of the Army's weapons, vehicles and equipment; while at the same time striving to test the item safely.

Items are tested to ensure that the Warfighter receives the best equipment possible. We validate that the equipment will work in the field as it is supposed to work without causing injuries to the Soldier. ATC produces recommendations for safety releases and safety confirmations to the Developmental Test Command, which communicates our test findings to the Program Manager.

Test safety is frontloaded in the risk assessment process. A risk assessment is conducted before each test to reduce the probability of an

incident occurring during testing. The results of this process are a safe work environment for our work force, a more efficient test with fewer problems, and a reduced probability of testing delays because of an accident.

The risk assessment process has resulted in fewer accidents and less severe accidents, enabling ATC to successfully accomplish our increased workload and fast paced testing in support of Operations Enduring and Iraqi Freedom. Critical test programs such as Stryker, slat armor, add-on armor kits for various light, medium and heavy tactical vehicles, wall breaching kits, and other rapidly fielded items have all benefited from the risk assessment process. ●

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Secretary of the Army visits ATC

On Jan. 28, Secretary of the Army Francis Harvey visited ATC for a Stryker Mobile Gun System (MGS) Live Fire Demo. Harvey was accompanied by Claude M. Bolton, Jr., Assistant Secretary of the Army for Acquisition, Logistics and Technology.

In addition to Stryker MGS, Harvey and Bolton also received a presentation on the up-armored Tactical Vehicle program and met with ATC's Experimental Fabrication Team, which designed the slat armor to protect Strykers from rocket propelled grenades, or RPGs.

"It's important to show people such as Secretary Harvey the importance of the work we do at ATC," said John Wallace, ATC's technical director. "The work we are doing every day is going over to places like Iraq and Afghanistan and saving Soldiers' lives."

Harvey and Bolton received an overview of the Stryker variants and observed a firing demonstration of the Remote Weapon Station (RWS) and the MGS before receiving presentations from Col. Peter Fuller, Stryker Brigade Combat Team project manager.

"We want to give the guy in theater all the options..." Harvey commented during a presentation.

The Stryker MGS variant was designed primarily as an infantry support platform and includes most of the features of the standard Stryker chassis, but also boasts an M68A1E7 105mm rifled cannon, as well as two secondary weapons, an M240C coaxial machine gun and an M2HB 0.50 caliber machine gun. The MGS cannon fires any NATO-standard 105mm ammunition, and the MGS fire control system is capable of engaging either moving or stationary targets at ranges up to and including 4000m. The fully stabilized MGS day and thermal sighting system allows for firing from a stationary vehicle, or while the MGS is on the move. A secondary sighting system, the commander's panoramic viewer, allows the MGS commander to survey the battlefield independently of the main fire control system.


"One unique feature of the MGS is the ammunition handling system, which stores any variety of ammunition types, up to 18 rounds, for the main cannon, and automatically loads the rounds at the command of either of the two turret operators," said Brian Hill, a test director at ATC.

Following the Stryker presentations, Harvey and Bolton received an overview of the up-armored

vehicle testing that has been ongoing at ATC since August 2003. To date, 268 armor solutions from 53 vendors have been tested. In addition to ballistic testing to determine the survivability of the kit, extensive automotive testing takes place as well to determine the effects of the armor kit on the vehicle. Vehicles currently being up-armored are the High Mobility Multipurpose Wheeled Vehicle; Family of Medium Tactical Vehicles; M939 Series 5-ton Trucks; Heavy Expanded Mobility Tactical Truck; Palletized Loading System; Heavy Equipment Transport; M915 Truck, Tractor; Nuclear, Biological, Chemical Reconnaissance System; and the M969 Semi-Trailer 5,000 gallon Fuel Tanker.

Before departing, Harvey and Bolton stopped by ATC's Experimental Fabrication Shop to thank the employees who worked on slat armor, which was designed, fabricated, installed and tested in just seven weeks to protect Strykers from rocket propelled grenades, better known as RPGs.

Article provided by **Susan Hagan**, ATSS, ATC Public Affairs Liaison. ●



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COVER PHOTO: Secretary of the Army Francis Harvey observes Stryker Mobile Gun System firing with ATC test directors John Hersey and Brian Hill.

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Commander COL Mary K. Brown
Editor Vonnie Hughey

Technical Director John R. Wallace
Design International Imaging Center

Turner Named Director of the Automotive Directorate

Colonel Mary K. Brown, commander of the Aberdeen Test Center, has announced the assignment of Craig Turner as the Director of the Automotive Directorate. The effective date of Turner's appointment was March 8.

Turner has been serving as acting director of the Automotive Directorate since June 2004. He replaces John Wallace who accepted the position of ATC Technical Director.

In making the announcement, Brown said, "Craig has years of testing experience and has most recently served as Chief, Automotive Instrumentation Division."

Born in Pennsylvania in 1961, he earned a bachelor's degree in mechanical engineering from Pennsylvania State University in 1983. Turner began his career in December 1983 as a test director in the Wheeled Vehicle Branch of the Material Testing Directorate (since renamed as ATC). For 10 years, he managed test programs of a variety of wheeled and tracked automotive equipment,



Craig Turner, New Director of the Automotive Directorate

such as the Heavy Expanded Mobility Tactical Truck (HEMTT), Heavy Equipment Transporter System (HETS), Bradley high-survivability vehicles, and the M88A1E1 medium recovery vehicle.

Most recently and since July 2000, he was the chief of the Automotive Instrumentation Division. In this position, Turner supervised a team of approximately 80 engineers and engineering technicians who provided field data acquisition, data

processing, and analysis support to the Automotive Directorate customers.

Previously in his career, from 1993 to 2000, he was a senior automotive test engineer in the Automotive Instrumentation Team. He was responsible for field data acquisition, data analysis, and reporting during testing of military systems such as the Family of Medium Tactical Vehicles (FMTV) and various tracked and wheeled foreign vehicle systems. He has participated in numerous commercial testing efforts, such as the development of

the ATC Automotive Impact Facility (automotive crash testing) and the validation of Society of Automotive Engineers vehicle testing standards.

In his new position as Director of the Automotive Directorate, Turner will be responsible for the testing of ground vehicles, vehicle-mounted weapons, fire control systems, and ancillary automotive items.

Article provided by **Vonnie Hughey**, Plans and Operations Directorate. ●

Aberdeen Test Center & University of Maryland take Automotive Engineering into 21st Century



Dr. C.D. Mote, Jr. (center), president of University of Maryland, College Park, signs the cooperative agreement with Col. Mary Brown, (fourth from left) ATC commander, establishing the Maryland Center for Automotive Research and Testing. Other officials attending the signing ceremony were from left: Dr. Bar-Cohen, chairman, Mechanical Engineering Department; John Wallace, ATC technical director; and Dr. Farvardin, dean of the Clark School of Engineering.

Aberdeen Test Center signed a cooperative agreement with the University of Maryland (UMD) April 9, officially establishing the Maryland Center for Automotive Research and Testing (MCART).

The agreement opens an avenue for university students in engineering disciplines to work with Army testers to solve automotive engineering problems to the benefit of the Army. It is also designed to expand the educational experience for the students and ATC employees.

"The partnership is already expanding even before it has been signed into place," said Dr. C.D. Mote Jr., president of UMD at College Park. "I was very impressed by the objective of MCART ...to be a world-recognized center of excellence in automotive engineering, testing, research, education, and technology, utilizing fully the

expanding resources of ATC and the University of Maryland. We're extremely excited about where this is and where it is going to go."

The new center encompasses the automotive engineering program at UMD's College Park campus as well as the testing of automotive systems at ATC. While ATC conducts the test and evaluation program,

the students will be involved with automotive research and technology development for testing, in collaboration with ATC.

Dr. Gregory Schultz, the driving force behind ATC's \$40 million Roadway Simulator (RWS), and RWS engineers Ivan Tong and Kevin Kefauver will advise UMD graduate students, who will visit the RWS at ATC for project coordination as well as academic advice. Schultz also has lab space at UMD and advises undergraduate students involved with automotive engineering at College Park.

The Roadway Simulator, which is the largest of its kind in the world and was designed for construction in three phases, enables Army testers to acquire data on vehicle performance characteristics such as handling, steering, braking, power-train performance, the durability of

vehicle components, and vehicle stability in turns and grades.

The system can simulate a wide range of turns, grades, road surfaces, vehicle speeds, acceleration and other factors that affect vehicle performance, in a laboratory environment where conditions can be precisely controlled.

The most recent phase of simulator expansion, completed in 2004, enables ATC to test dual-axle vehicles weighing up to 60,000 pounds. The final phase of RWS expansion, planned for later this year, will enable ATC to test tractor/trailer type vehicles weighing up to 80,000 pounds.

The university is primarily focused on improving and developing test technologies for ATC's simulator and other field tests.

Plans are in the works to expand to other test instrumentation developments, to help the Army test automotive systems for Soldiers.

One of Schultz's graduate students is working on automating double-lane-change tests on the simulator, and another is striving to determine some of the dynamics of three- and four-axle trucks and to develop a model for studying their yaw stability. A third graduate student, who is also a core test director at ATC, is developing a tire testing attachment for the RWS, to give the

(continued on page 8)



Secretary of the Army Visits ATC



COL Mary Brown, ATC commander, welcomes Secretary of the Army Francis Harvey and Assistant Secretary of the Army for Acquisition, Logistics and Technology Claude Bolton to Aberdeen Test Center.

Secretary Harvey listens as Brian Hill provides an overview of the Stryker Mobile Gun System.



John Hersey, senior test director for the Stryker Combat Vehicle Production Verification Test, provides Secretary of the Army **Francis Harvey** with an overview of the Stryker Infantry Carrier Vehicle.



On Jan. 28, Secretary of the Army Francis Harvey visited ATC for a Stryker Mobile Gun System (MGS) Live Fire Demo. Harvey was accompanied by Claude M. Bolton, Jr., Assistant Secretary of the Army for Acquisition, Logistics and Technology.

Secretary Harvey observes the Stryker Mobile Gun System firing at ATC's Trench Warfare.



A Stryker Mobile Gun System fires at ATC's Trench Warfare.



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Army the capability to individually test large military tires.

ATC testers have completed more than two dozen tests on the simulator recently to meet urgent needs identified by the Army as it conducts the war on terrorism. Some of this work focused on improving the road-handling characteristics of the Army's up-armored High Mobility Multipurpose Wheeled Vehicle, dubbed the "Humvee."

Among other things, this testing led to new tires, springs and sway bars for the heavier Humvees.

The MCART program is at a starting point from which it will grow, according to Schultz.

That sentiment was echoed during the signing ceremony for the program.

Col. Mary Brown, ATC commander, provided a list of future MCART activities.

- Developing a new Vehicle Durability Simulator for advanced reliability testing,
- Providing ATC employees and other students a focus for graduate studies in the automotive field,
- Encouraging the use of cooperative engineering education students in ATC test and research facilities,
- Providing new career opportunities for university engineering students,
- Advancing the careers of current ATC employees, and
- Developing new research and business opportunities in the automotive field.

She envisions these collaborative efforts as leading to the development of vehicles with advanced power trains, collision-avoidance

technologies, systems designed for vehicle stability, and light-weight material technologies.

Mote was equally optimistic about the future of MCART.

Among the places that Mote sees it going are improving automotive performance and safety, making vehicles more stable and eliminating rollovers, improving fuel economy, reducing component failures, and cutting vehicle emissions.

"This is an exciting opportunity," he said. "It has all the right chemistry. . . and has facilities at Aberdeen and the University of Maryland that are singular, where partners can grow from the capacity of others."

Article provided by **Mike Cast**, Developmental Test Command Public Affairs Office. ●

DEFENSE TEST RESOURCE MANAGEMENT CENTER

Per Title 10 Section 196, the Department of Defense (DoD) established the Defense Test Resource Management Center (TRMC), a DoD field activity under the authority and direction of the Under Secretary of Defense for Acquisition, Technology and Logistics USD (AT&L).

The Director of TRMC, Dr. John B. Foulkes, is responsible for the planning and assessment of the adequacy of the Major Range and Test Facility Base (MRTFB) to provide adequate testing in support of development, acquisition, fielding, and sustainment of defense systems. The TRMC also maintains an awareness of other test and evaluation (T&E)

facilities and resources, within and outside the Department, and their impact on DoD requirements. Dr. Foulkes and his agency are charged with the following tasks:

- Serve as the principal advisor to the Secretary and Deputy Secretary of Defense and the USD (AT&L) on matters pertaining to strategic planning for and assessment of the MRTFB.
- Complete a strategic plan, covering the period of 10 fiscal years, that reflects the needs of the DoD with respect to T&E facilities and resources at least one every two years.
- Review the proposed T&E budgets of the Military Departments and Defense Agencies with T&E responsibilities and certify annually whether such proposed budgets are adequate and provide balanced support for the T&E strategic plan.

- Ensure that the MRTFB institutional and overhead costs are fully funded through the DoD T&E direct appropriations and that no more than the direct costs for the use of the MRTFB are charged to DoD users.
- Issue guidance to the DoD components with respect to MRTFB planning and establish common performance standards across the MRTFB to rationalize and prioritize future investments and establish clear capability requirements.
- Review and provide oversight of all other T&E facilities and resources, within and outside the DoD and their impacts on DoD requirements.
- Administer the Central Test and Evaluation Investment Program and the DoD Test and Evaluation Science and Technology Program.

ATC Names New Plans and Operations Director

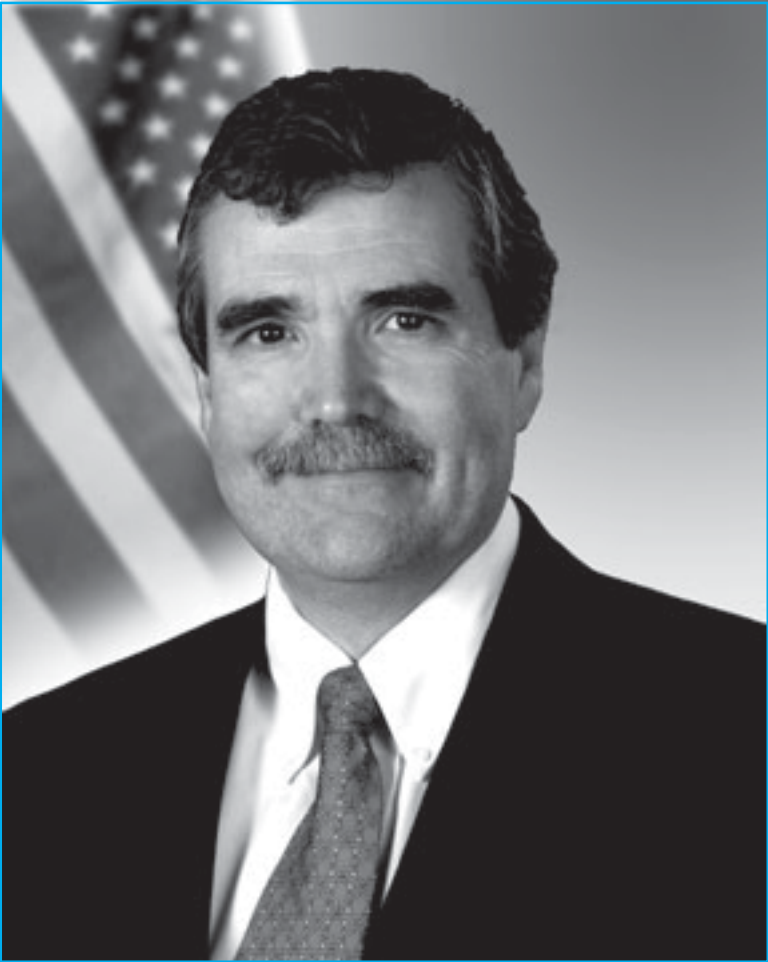
David L. Jennings has been named the director of Plans and Operations Directorate.

Jennings has been acting director of the Plans and Operations Directorate since July 2004, when he replaced former director Mike Zweibel, who is attending the U.S. Army War College at Carlisle, Pennsylvania.

ATC commander, Col. Mary Brown said Jennings brings years of testing support experience to the position.

He came to the Materiel Testing Directorate (the forerunner of Aberdeen Test Center) in 1978 as an audiovisual production officer. He went on to become chief of the International Imaging Team. In this position, he supervised a team responsible for the instrumentation and activities necessary to collect and present visual test data for analysis, review and processing. During his tenure, video production teams traveled the world documenting Army activities.

Jennings has over 33 years of federal service with the Department of Army. He began his career as a GS-02 cooperative



David L. Jennings, new director of Plans and Operations Directorate

education student at White Sands Missile Range, New Mexico tracking missiles. During his career at ATC he has served on and led a number of special projects for the Army Materiel Command, the United States Special Operations Command and the Joint Special Operations Command.

He has a bachelor's degree in journalism and mass communications from New Mexico State University and a master of science in instructional technol-

ogy from Towson State University.

In his new position as the director of Plans and Operations Directorate, Jennings will be responsible for directing a multi-faceted program for the management of operations. The newly established directorate brings together critical test support services to enable ATC test directors to better accomplish their mission. Services include management of information technology and information assurance, technical reports and imaging, field support with the atmospherics effects and geodetic

and mapping teams. In addition, day to day range control and scheduling with range operations division and the plans division give the directorate the tools necessary to provide the test community with quality products and timely service.

Jennings is married to Debbie Jennings and has two daughters Lana and Victoria.

Article provided by **Vonnie Hughey**, Plans and Operations Directorate. ●

Development Phase of Soldier System Test Facility Nears Completion

The Warrior Mission Need states “a need exists to integrate multiple soldier components and rapidly leverage emerging technology to enable increased small unit lethality, command and control, mobility, survivability and sustainment.” This need extends to integration with aerial and vehicle platforms as well as tactical network systems and compatibility with joint service operations. In 2003, ATC and PEO-Soldier partnered to invest and build a Soldier Systems Test Facility to address current and evolving test

Development of SSTF was divided into three phases with final completion scheduled for 2006.

requirements for integration of military systems. The facility had to consist of varied terrain, fixed and reconfigurable structures and performance firing ranges in order to provide diverse mission capability while providing the capability to test and demonstrate every item within PEO-Soldier inventory.

Fortunately, ATC possessed an area at Mulberry Point that contained the natural terrain features (controlled air, water, land access) to meet these requirements. Development of SSTF was

divided into three phases with final completion scheduled for 2006. Phase one included upgrade of utilities and site preparation, construction of the Data Acquisition and Control Center (DACC) building and the Performance Firing Complex, consisting of an outdoor 500m pop-up target range and indoor range, arms room and an instrumented Military Operations in Urban Terrain (MOUT) complex designed as a two-story Middle Eastern warlord compound. The DACC, already completed, is the hub of the SSTF and includes target and instrumentation control, After Action Review room, visitor exhibit and briefing rooms. The Performance Firing Complex, instrumented with visual and thermal targets, scoring system and cameras, provides the capability to test the integration of individual and crew-served weapons with other platforms. The indoor range includes variable lighting conditions and a rugged HVAC system for testing of soldier weapons and equipment in tactical obscurants. Scheduled completion date for Phase one is June 2005.

Phase two consists of the Human Factors complex, an expanded instrumented MOUT area and additional target pads out to 2500m at the Performance Firing Complex. The Human Factors complex will include a laboratory with an oversized vehicle bay and instrumented courses to test individual soldier equipment

portability and rainwear. The expanded MOUT area will reflect an urban sprawl compound, complete with closely set buildings and a roadway network. Scheduled completion for Phase two is April 2006.

The final phase consists of mission support buildings: the soldier preparation building, vehicle preparation building and the test and range operations (TRO) building. The soldier and vehicle preparation buildings, designed for platoon level missions, include two vehicle bays, a training classroom, showers, lockers and equipment area for soldiers to prepare for test missions. The TRO building will serve as the Tactical Operations Center for ATC range personnel and transient test personnel. Full operational capability is anticipated in fiscal year 2007.

Additional instrumentation sets to meet emerging test requirements such as indoor and outdoor tracking systems, biometric sensing systems, communications and networking data collection systems are currently being studied to ensure SSTF remains a state-of-the-art facility. The Test Site Integration system developed by ATC will link data collected at SSTF with the Distributed Research and Engineering Network.

For more information, contact **Lindsay Yowell** at 410-278-9629 (DSN 298), e-mail: lindsay.yowell@atc.army.mil. ●

ATC Globe

ATC Engineer Named ATEC Engineer of the Year

Paul C. Klara, P.E. was selected as the U.S. Army Test and Evaluation Command (ATEC) 2005 National Society of Professional Engineers (NSPE) Engineer of the Year and was one of 25 professional engineers that were eligible to compete and be selected as the top ten finalists and, subsequently, the 2005 Federal Engineer of the Year Award (FEYA).

Klara's nomination and selection was based on his exceptional leadership, selfless service, and superior technical achievement. Although he is considered one of the

countries foremost experts in ammunition emission testing, Klara continued to expand his knowledge through specialized training and self improvement. He demonstrates a concern for the long term viability of ATEC, ATC and the test community by actively counseling and mentoring both junior test directors and student employees. His personal interest not only increases the technical competency of these individuals but serves as a positive role model to retain these employees.

Klara, chief of the Experimental Ammunition Division for ATC, was chosen for his efforts as a senior test director within ATC's Military Environmental Technol-



Paul C. Klara, P.E.

ogy Demonstration Center. In October of 2004, Klara was promoted to the chief of the Experimental Ammunition Division. In this capacity, he has the opportunity to support the entire command with ammunition shipment, storage, management, testing, and safety. He is worthy of the high honor bestowed upon him by the NSPE and ATEC.

He has also received the 2003 ATC Technical Director's Award recognizing the superiority of his technical reports and data reporting.

Klara has a patent pending for a design for the cost effective and environmentally preferable process for downloading 90-mm munitions. He is responsible for the creation of

three of ATC's unique facilities, the Emissions Characterization Chamber, the Large Octagon Test Chamber, and the Blast Sphere which are instrumental in the gathering of emissions from exploding ordnance.

The 26th annual FEYA ceremony was held at the National Press Club in Washington, D.C., on February 24. Klara did not move on as one of the 10 finalists; however, ATEC presented him with a plaque in recognition for being the ATEC 2005 NSPE Engineer of the Year.

The NSPE award program recognizes outstanding engineers employed in the federal government.

The FEYA is selected by a panel of distinguished judges, established by the NSPE professional engineers in Government. A panel of judges selects the winner based on education, continuing education, professional and technical society activities, awards and honors, civic and humanitarian activities and engineering achievements.

Article written by **Vonnie Hughey**, Plans and Operations Directorate and **Dennis Teefy**, Survivability/Lethality Directorate. ●